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ACCELEROMETER TRANSDUCER USED FOR SEISMIC RECORDING

Background of the Invention

The present disclosure relates generally to apparatus and methods for operating and testing a sensor assembly, and in particular to a multi-axis

5 accelerometer sensor assembly.

In operating a multi-axis accelerometer sensor assembly, certain parameters are required to analyze the data acquired from the multi-axis accelerometer sensor assembly. The operating parameters that are used for analysis typically include tilt angle, sensor orientation, ground-coupling, position of the sensor assembly, and synchronization of the operation of the sensor

11 assembly. The state-of-health of the sensor assembly is also typically required to validate the operation of the sensor assembly.

The present invention is directed at acquiring the necessary parameters for data analysis and validating the operation of the sensor assembly.

Summary of the Invention

According to one aspect of the present invention, a system for acquiring 17 seismic data is provided that includes one or more sensor modules adapted to sense seismic data and one or more seismic recorders adapted to record seismic data and coupled to the sensor module.

According to another aspect of the present invention, an apparatus for sensing seismic energy is provided that includes a sensor adapted to sense seismic energy, and the sensor includes one or more accelerometers, and the 23 accelerometers include one or more axes of sensitivity.

According to another aspect of the present invention, an apparatus for sensing seismic energy is provided that includes a sensor adapted to sense seismic energy, and the sensor includes one or more micro-machined sensor elements.

According to another aspect of the present invention, an apparatus for 29 synchronizing the operation of a sensor to a common time base is provided that includes a sensor module adapted to sensing seismic energy, and the sensor module includes one or more sensors, and the sensor module further includes a

15 This appln. is a 371 of PCT/US00/06905 03/16/00
11/25/02 which claims benefit of ~~60~~ provisional apph 60/125,076 03/17/99